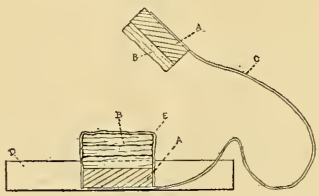
HERBARIUM NOTES *

By Paul C. Standley

In mounting a considerable number of plants recently the writer had occasion to notice a number of common defects in labels and in herbarium specimens — defects which could easily be remedied by a little care and forethought on the part of the collector; some of these are discussed in the following notes.

Labels should never be printed on stiff paper. Such paper is certain to curl up at the corners and edges unless it is kept under pressure until dry. True, if the corners do curl at first they are usually flat on the sheet after they are thoroughly dry, but they will always be loose and likely to be torn or still further loosened if anything happens to catch on them. It is preferable to use paper that is thin and will not curl away from the sheets when it is wet.

The size, too, deserves consideration. The largest labels that I have seen are about 2¾ by 5¾ inches and some of the specimens which they accompanied had to be broken to keep them from covering parts of the labels. Such pieces of paper require too much time for pasting on the sheet and are not necessary if the labels are filled in by hand, no matter how large a hand the collector may write, and are still less necessary when all the data are printed in. The size most generally used seems to be about 4¼ by 2⅛ inches.



While neatness of labels is always desirable, other ornamentation than the necessary wording is superfluous. This applies to ornamental borders and all advertising of the scenic attractions of the locality in which the plants were collected.

The type used should be plain. The most conspicuous parts of the label should be the name of the state in which the collection was made and the name of the plant. These things are not of so much importance in a small herbarium but when working with

* Illustrated with the aid of the Catherine McManes fund.

a large number of specimens in one of the larger herbaria they will save a great deal of time.

Typewritten labels are not desirable unless black indelible ink is used. The purple and blue ink that is ordinarily used on typewriter ribbons will fade so much in eight or ten years that it will be impossible to read it.

Of course there is every variation in the quality of the specimens themselves, due in part to the climatic conditions of the locality in which they were secured (and very largely to the pressure under which they were dried). The preservation of the original color of the plants is always desirable but not always possible with thick and fleshy specimens, with certain plants in which peculiar chemical changes take place in drying, or in very damp climates.

Here in New Mexico the making of good specimens is a very simple matter providing the proper kind of plants can be found. It is often unnecessary to change the driers for small plants or those which contain little moisture. Some of our best specimens have been made in the following manner: First a drier is placed upon the table; on this is laid a sheet of drying paper upon which the plant is placed; over this another drier, then a sheet of corrugated paper such as is used in packing glassware, etc.; over this another drying paper and specimen, or if one prefers another drier and then the sheet; and so on until a bundle of sufficient size is formed. This is then strapped and thrown out in the sunshine upon the sand and left for several days. It is necessary to tighten the straps occasionally but no other attention is needed unless a rain should come. Excellent specimens can be made in this way, even of the cacti and other fleshy plants. Of course this method is practicable only in a dry region where there is an abundance of hot sunshine. In the mountains frequent changes of driers are necessary.

Most plants which contain considerable moisture will be blackened and consequently ruined if the bundles containing them are placed in the sun and heated to a high temperature before the driers have been changed at least once. If the driers themselves are heated before the plants are placed between them the heat

does not seem to blacken the plants and hastens their drying appreciably.

Too large and too generous specimens are an abomination when it comes to mounting them. It is best to use drying papers a little smaller than the standard size of herbarium sheets; then there will be no difficulty in getting the specimens upon the sheets. Sometimes one receives specimens so large that they must be almost ruined in trimming them down to the size of the mounting paper.

If a sheet contains more material than can be conveniently mounted upon an ordinary herbarium sheet it necessitates the writing of a new label or else the throwing away of the surplus material. The second course is perhaps the better, for it is very seldom that one cares for two sheets of one collection. If one sheet is properly filled it should, except in rare cases, contain material enough for the study of a plant.

Besides the use for corrugated paper mentioned above we have found it useful in mounting. When we are gluing plants upon the sheets we lay a piece of the corrugated paper over the glued plant, corrugated side down, and then a drier upon this, continuing in this manner until we have a pile of sufficient height to be placed somewhere and weighted until the glue has thoroughly dried. The corrugated paper, because of its corrugations, has less surface to stick to the plant and holds it in contact with the mounting paper just as well as the driers or sheets of pasteboard would do.

The accompanying figure shows an end view of a piece of apparatus that we have found very useful for moistening straps in strapping herbarium specimens. It was designed and made by Mr. O. B. Metcalfe, who was formerly student assistant in botany here. *AA* are pieces of wood about 3½ inches long and 1⅛ inches wide; to these is riveted a strip of galvanized iron *C*, which is T-shaped at the ends so as to cover the blocks of wood; upon the wood are tacked two or three layers of ordinary felt drying paper, *BB*; in order to make the paper last longer it is covered with a piece of cloth of medium thickness, *E*. The apparatus is then placed in a small tin pan, *D* (the lid of a baking powder box will

do), containing a little water. The straps are picked up with a pair of forceps used in applying them to the sheets, and while held in the forceps are laid on the moistened lower pad, while the upper one is pressed down upon it. In this way the straps can be moistened very rapidly and one soon learns to regulate the amount of water in the pan so that they will get just the right amount of moisture.

Herbarium of the New Mexico Agricultural College

SHORTER NOTES

The Cedar of Lebanon. — I have read the compilation of notes on *Cedrus Libani* in Torreya, and as usual in similar publications botanists alone are made to figure. William Lithgow, a Scotch traveller, visited the Lebanon Grove in 1611 and found twenty-four trees much burnt in one grove, and spoke of another of seventeen trees nine miles west.

One of the first trees planted in Britain *is* at Bretby, Derbyshire, planted in 1676. The late Sir J. D. Wolff, "Rambling Recollections," Vol. 2, p. 18, seems to have known Rustem Pacha (spoken of by J. D. Hooker) who told him that he replanted the Lebanon Grove with young trees from the Brussels Botanical Garden! (This ought to be easily verified.)

Professor Marquand's tree at Princeton had a fine growth and lots of cones a year or two ago, but remains quite pyramidal (see Downing's 1859 ed.).

James MacPherson

Trenton, New Jersey

Submerged Willows. — My attention was called during the past summer to an interesting illustration of the tenacity with which our common willows cling to life. An artificial lake was formed in my vicinity last year by damming a small brook, making a lake nearly a mile long and fifty feet deep at the deepest point. Part of the valley which was covered by the water was occupied by a thicket of willows. These were left standing with the belief that they would soon rot away and disappear, and were covered so that their topmost branches were five or six feet below